

Amendments to the Claims:

This following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-17. (canceled)

18. (currently amended) ~~The~~ An integrated laser diode assembly ~~of claim 15 further~~ comprising:

a laser diode;

a first lens proximate said laser diode, said first lens arranged and oriented with respect to said laser diode to collimate light from said laser diode;

an integrated variable optical attenuator proximate said first lens opposite said laser diode, said integrated variable optical attenuator arranged and oriented to receive collimated light from said first lens, said integrated variable optical attenuator further comprising:

a liquid crystal cell having first and second plates, each plate having an electrode mounted thereon, said liquid crystal cell rotating polarized light responsive to the amount of voltage applied between said electrodes, said first plate proximate and facing said first lens; and

an optical isolator core having a first polarizer fixed to said second plate of said liquid crystal cell, a Faraday rotator fixed to said first polarizer, and a second polarizer fixed to said Faraday rotator, the amount of polarized light passing through said liquid crystal cell and said optical isolator core controlled by the amount of voltage applied between said electrodes of said liquid crystal cell;

a second lens proximate said second polarizer of said optical isolator core opposite said Faraday rotator, said second lens arranged and oriented to focus light from said integrated variable optical attenuator;

a section of output optical fiber having an end, said output optical fiber section arranged and oriented with respect to said second lens so that light from said second lens is focused at said end of said output optical fiber section;

a base, said laser diode, first lens, integrated variable optical attenuator; second lens and said end of said output optical fiber section mounted thereto; and

a package enclosing said base, said laser diode, first lens, integrated variable optical attenuator and second lens, a portion of said output optical fiber section removed from said end mounted to said package.

19. (currently amended) ~~The~~ An integrated laser diode assembly ~~of claim 15 further~~ comprising:

a laser diode;

a first lens proximate said laser diode, said first lens arranged and oriented with respect to said laser diode to collimate light from said laser diode;

an integrated variable optical attenuator proximate said first lens opposite said laser diode, said integrated variable optical attenuator arranged and oriented to receive collimated light from said first lens, said integrated variable optical attenuator further comprising:

a liquid crystal cell having first and second plates, each plate having an electrode mounted thereon, said liquid crystal cell rotating polarized light responsive to the amount of voltage applied between said electrodes, said first plate proximate and facing said first lens; and

an optical isolator core having a first polarizer fixed to said second plate of said liquid crystal cell, a Faraday rotator fixed to said first polarizer, and a second polarizer fixed to said Faraday rotator, the amount of polarized light passing through said liquid crystal cell and said optical isolator core controlled by the amount of voltage applied between said electrodes of said liquid crystal cell;

a second lens proximate said second polarizer of said optical isolator core opposite said Faraday rotator, said second lens arranged and oriented to focus light from said integrated variable optical attenuator;

a section of output optical fiber having an end, said output optical fiber section arranged and oriented with respect to said second lens so that light from said second lens is focused at said end of said output optical fiber section;

a base, said laser diode, first lens, and integrated variable optical attenuator mounted thereto; and

a package enclosing said base, said laser diode, first lens, and integrated variable optical attenuator, said second lens, a portion of said output optical fiber section including said end mounted to said package.

20. (currently amended) ~~The~~ An integrated laser diode assembly ~~of claim 15 further~~ comprising:

a laser diode;

a first lens proximate said laser diode, said first lens arranged and oriented with respect to said laser diode to collimate light from said laser diode;

an integrated variable optical attenuator proximate said first lens opposite said laser diode, said integrated variable optical attenuator arranged and oriented to receive collimated light from said first lens, said integrated variable optical attenuator further comprising:

a liquid crystal cell having first and second plates, each plate having an electrode mounted thereon, said liquid crystal cell rotating polarized light responsive to the amount of voltage applied between said electrodes, said first plate proximate and facing said first lens; and

an optical isolator core having a first polarizer fixed to said second plate of said liquid crystal cell, a Faraday rotator fixed to said first polarizer, and a second polarizer fixed to said Faraday rotator, the amount of polarized light passing through said liquid crystal cell and said optical isolator core controlled by the amount of voltage applied between said electrodes of said liquid crystal cell;

a second lens proximate said second polarizer of said optical isolator core opposite said Faraday rotator, said second lens arranged and oriented to focus light from said integrated variable optical attenuator;

a section of output optical fiber having an end, said output optical fiber section arranged and oriented with respect to said second lens so that light from said second lens is focused at said end of said output optical fiber section;

a package enclosing and mounting said ~~base~~, laser diode, first lens, and integrated variable optical attenuator, second lens, a portion of said output optical fiber section including said end mounted to said package.

21. (original) The integrated laser diode assembly of claim 20 wherein said laser diode is mounted in a laser diode package and said laser diode package is mounted to said package.

22. (original) The integrated laser diode assembly of claim 21 wherein said laser diode package comprises further comprising a TO-can.